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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/347,523	07/06/1999	YOSHIYUKI GOMI	103229	3978

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EXAMINER

NGUYEN, DUNG T

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/347,523	GOMI, YOSHIYUKI	
	Examiner	Art Unit	
	Dung Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004 and 03 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,5,7,8 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,5,7,8,27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/22/2004 has been entered.

Applicants' amendment dated 06/03/2004 has been received and entered. By the amendment, claims 4-5, 7-8 and 27 are now pending in the application.

Specification

2. The disclosure is objected to because of the following informalities: page 11, line 8, "31" should be corrected as --32--.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification fails to provide a proper antecedent basis for the feature relating to the height of the adhesive over the step portion as recited in the claims 4, 7 and 27.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 7 and 27 recites the limitation "inter lens". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 4-5, 7-8 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (APA), figure 11 in view of Ray et al, US Patent No. 5,701,008, of record.

Regarding the above claims, APA discloses an electro-optical device (figure 11) comprising:

- . a pair of substrates (30, 31);
- . an electro-optical material (39);
- . a plurality of pixels (46);
- . a lens array (L) with a plurality of convex microlenses as claimed;
- . a step portion (LB);
- . a transparent cover (49) adhered to the lens;
- . a photo curing resin sealing material would be inherently forming for adhering two substrates together (see APA'S specification, page 3, lines 4-5).

The difference between the claims and the APA is that the step portion being substantially equal in height to the microlenses as well as a thin layer of the adhesive being disposed between the step portion and the sealing material including a height that is

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less than the height of the adhesive over inter lenses position adjacent to one of the microlenses. However, Ray et al do disclose that a step portion can be formed with the height of microlenses as well as the thin layer of the adhesive being disposed between the step portion and the sealing material width of the step portion being wider than the entire width of the sealing material (8) (e.g., upper portion of the sealing material) as shown in figure 4, and the height of the thin layer inherently formed less than that of the adhesive over inter lenses position adjacent to one of the microlenses. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify APA'S electro-optical device having a step portion which is substantially equal in height to the microlenses in order to improve the detection efficiency of detector element (i.e., pixels) (see col. 2, ln.. 21).

In addition, in case of no photo curing resin using for sealant, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form a photo curing resin based material because it is notoriously well known in the art using such photo curing resin for the purpose of sealing, and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

It is noted that since the method of manufacturing the device is merely a list of forming each component and each component must be formed to make the device, the method of manufacturing would be inherent to the device.

Response to Arguments

8. Applicant's arguments filed 06/03/2004 have been fully considered but they are not persuasive.

First, in response to Applicants' arguments that APA and Ray fail to disclose or suggest the thin layer of the adhesive being disposed between the step portion and the sealing material, and the width of the thin layer being wider than that of the sealing material (amendment, page 6), the Examiner respectfully disagrees with the Applicants' view-point since the same is true of the combination of APA and Ray. It should be noted that the modification to the APA is employed a Ray's step portion into the APA's lens array; therefore, the thin adhesive layer (48) would be stand between the step portion and the sealing (52). In addition, as stated in the previous office action, the width of the thin layer which is corresponding to the step portion would be wider than that of the sealing material.

Second, in response to Applicants' arguments that APA and Ray fail to disclose or suggest the thin layer includes a height that is less than the height of the adhesive over inter lenses position adjacent to one of the microlenses (amendment, page 6-7). It should also be noted that the combination of the APA and Ray's step portion would result a device having a step portion at a sealing area; therefore the height of the adhesive thin film over the step portion would be less than that of the adhesive over inter lenses (i.e., the height of the adhesive over the inter lenses would be the total of the height of the adhesive thin film and the height of the microlenses).

Third, in response to Applicant's argument that there is no suggestion to combine the references (amendment, page 7), the examiner recognizes that obviousness can only

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be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the combination of APA and Ray would not place the Ray's IR window over the sealing material as assert by Applicants; on the other hand, the modification to the APA, as stated above, would employ the advantage of the Ray's step portion over the APA's device in order to improve the detection efficiency of detector elements (see col. 2, ln. 21).

Accordingly, the rejection of the above claims stand.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
08/21/2004

A handwritten signature in black ink, appearing to read 'Dung Nguyen', with a long horizontal flourish extending to the right.

Dung Nguyen
Primary Examiner
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